



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

7/21

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,132	05/29/2001	Knut E. Rasmussen	01-11 US	9635
7590 01/04/2006				
Varian Inc 3120 Hansen Way M S D 102 Palo Alto, CA 94304			EXAMINER VENCJ, DAVID J	
			ART UNIT 1641	PAPER NUMBER

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/857,132	Applicant(s) RASMUSSEN ET AL.	
	Examiner David J. Venci	Art Unit 1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on September 26, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-61 is/are pending in the application.
- 4a) Of the above claim(s) 21-41 and 59-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 21-61 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on May 29, 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Examiner acknowledges Applicants' submission of Notice of Appeal and Appeal brief on September 26, 2005. Examiner hereby withdraws the finality of the Office Action dated March 1, 2005, in view of recent discovery of relevant prior art. Rejections based on the newly cited prior art follow.

Election/Restrictions

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. Restriction is required under 35 U.S.C. 121 and 372, and 37 CFR 1.499.

- I. Claims 21-41 and 59-61, drawn to an apparatus for extraction
- II. Claims 42-58, drawn to a method for extraction

According to PCT Rule 13.2, unity of invention exists only when the shared same or corresponding technical feature is a contribution over the prior art. Here, the apparatus of group I is used in the method of group II. However, the technical feature linking group I with group II does not constitute a special technical feature as defined by PCT Rule 13.2 because the technical feature does not define a contribution over the prior art. Sirkar *et al.* (US 5,637,224) also describe an apparatus comprising a first container (see *e.g.*, Fig. 1, module 112; Fig. 2, tight housing 200), a hollow second container disposed within the first container (see *e.g.*, Fig. 3, feed solution chamber 155; Figs. 4A and 4B, vacuum atmosphere chamber 160) having a permeable membrane (see *e.g.*, Fig. 3, microporous wall or membrane 158; Fig. 4A, nonporous wall 162; Fig. 4B, microporous hollow fiber 161, ultrathin nonporous skin 163), an acceptor solution disposed within the second container (see col. 12, line 36, "pore liquid"), and a transport means (see *e.g.*, Fig. 1, pump 104).

Art Unit: 1641

Therefore, unity of invention is lacking because the technical feature linking group I with group II does not constitute a special technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art.

During a telephone conversation with Walter Hackler on December 22, 2005, a provisional election was made, without traverse, to prosecute the invention of claims 42-58. Affirmation of this election must be made by applicant in replying to this Office action.

Claims 21-41 and 59-61 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a non-elected invention.

Currently, claims 42-58 are under examination.

Art Unit: 1641

Specification

The disclosure is objected to because of the following informalities. Appropriate correction is required.

Throughout the specification, the recitation of "liquid-liquid-liquid" is indefinite. The identity of three liquid species belonging to "liquid-liquid-liquid" is not clear.

On page 10, line 2, the recitation of the pronoun "that" is indefinite. The identity of the object(s) referenced by "that" is/are not clear.

On page 10, line 29, the recitation of the phrase "the solvent forming the liquid membrane should be immobilised" is indefinite. How a solvent forms a membrane is not clear. How a solvent is immobilized is not clear. The standard for ascertaining "immobilised" is not clear. The identity of reference point(s) required for ascertaining "immobilised" is not clear. The recitation of "the solvent forming the liquid membrane" lacks antecedent basis.

On page 10, lines 34-36, the recitation of the phrase "the fibre is typically 2-10 cm to allow fixed volumes of acceptor solution in the range of 5-50 ul to be filled into the hollow fibre" is indefinite. How a solution is "filled" is not clear. Whether the hollow fibre is "filled" is not clear.

The specification is objected to under 37 CFR 1.75(d)(1) and MPEP § 608.01(o) for failing to provide proper antecedent basis for the claimed subject matter. The specification does not provide sufficient antecedent basis for the following claim language:

In claims 42-58, the object(s) or step(s) required for "disposing"

In claim 42, the object(s) or step(s) required for "allowing analyte equilibrium"

In claims 48 and 54, the object(s) or step(s) required for "enriching analyte"

The object(s) or step(s) required for performing claims 49 and 55

Art Unit: 1641

Drawings

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to for the following reasons:

In Fig. 2, the identity of "Water immiscible membrane" is not clear. The identity of "Aqueous acceptor solution" is not clear. The physical distinction between "Aqueous acceptor solution" and "Water immiscible membrane" is not clear.

In Figs. 3 and 4, the abbreviation "LLMBE" is not clear.

Art Unit: 1641

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 42-58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 42, 48 and 54, the preamble recitation of "liquid-liquid-liquid" is indefinite. The identity of three liquid species belonging to "liquid-liquid-liquid" is not clear.

In claims 42-58, the recitation of the term "disposing" is indefinite. The object(s) or step(s) required for performance of "disposing" is/are not clear. The object(s) or step(s) required for performance of "disposing" lack antecedent support in the specification.

In claim 42, the recitation of the phrase "allowing analyte equilibrium" is indefinite. The object(s) or step(s) required for performance of "allowing analyte equilibrium" is/are not clear. The object(s) or step(s) required for performance of "allowing analyte equilibrium" lack antecedent support in the specification.

In claims 48 and 54, the recitation of the phrase "enriching analyte" is indefinite. The object(s) or step(s) required for "enriching analyte" is/are not clear. The object(s) or step(s) required for "enriching analyte" lack antecedent support in the specification.

In claims 49 and 55, the object(s) or step(s) required for "disposing a liquid membrane in said fibre pores before disposing said second hollow container into said sample solution" lack antecedent support in the specification.

Art Unit: 1641

In claims 43, 49 and 55, the recitation of "liquid membrane" is indefinite. How a solvent forms a membrane is not clear.

In claim 42, the recitation of "disposing a second container, that is hollow, into said sample solution, providing the second container..." is grammatically awkward and indefinite. Whether said recitation requires two distinct steps of "disposing" and "providing" is not clear.

In claim 42, the recitation of permissive language "allowing" is indefinite. Whether verbiage subsequent to "allowing" contains required claim limitations is not clear.

Art Unit: 1641

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 42-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Sirkar *et al.* (US 5,637,224).

Sirkar *et al.* describe an extraction method comprising the steps of: disposing a sample solution into a first container (see *e.g.*, Fig. 1, module 112; Fig. 2, tight housing 200), disposing a hollow second container into said sample solution (see *e.g.*, Fig. 3, feed solution chamber 155; Figs. 4A and 4B, vacuum atmosphere chamber 160), providing the second container with a permeable membrane wall having fiber pores (see *e.g.*, Fig. 3, microporous wall or membrane 158; Fig. 4A, nonporous wall 162; Fig. 4B, microporous hollow fiber 161, ultrathin nonporous skin 163), disposing an acceptor solution into the second container (see col. 12, line 36, "pore liquid"), and removing analyte enriched acceptor solution from said second container (see *e.g.*, Fig. 3, extractant chamber 156).

With respect to claims 45, 51 and 57, Sirkar *et al.* describe a tubular fiber with both closed and open ends (see Fig. 2, *noting* the appearance of open end inlet 115, and closed end outlet 117).

With respect to claims 46, 52 and 58, Sirkar *et al.* describe a tubular fiber with two open ends (see Fig. 2, *noting* the appearance of open inlet 115, and open outlet 117; col. 7, lines 60-62, "discharged when necessary through the extractant or liquid membrane outlet 117").

Art Unit: 1641

With respect to claims 47 and 53, Examiner posits that Sirkar *et al.* necessarily describe an acceptor solution that has "a pH for ionizing the analyte to prevent ionized analyte from passing from said acceptor solution through the membrane wall and into the sample solution" and would be so recognized by persons of ordinary skill in the art.

Art Unit: 1641

Response to Arguments

In prior Office Action, claims 21-60 were rejected under 35 U.S.C. 103(a) in view of Rasmussen & Krogh (WO 97/25606), Berg (US 6,164,144) and Schoonen *et al.* (US 5,615,671). Applicants' argumentation is fully persuasive and sufficient to overcome this rejection. Accordingly, this rejection is withdrawn.

Art Unit: 1641

Conclusion


No claims are allowed at this time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Venci whose telephone number is 571-272-2879. The examiner can normally be reached on 08:00 - 16:30 (EST). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David J Venci
Examiner
Art Unit 1641

djv


LONG V. LE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600
12/22/05